In the Claims

The following listing of claims replaces all prior versions of the claims in the application:

1 (currently amended). A surgical reamer for cutting a bone socket, comprising: a cutting structure rotatable about a longitudinal axis and having a domed shell portion with an outer surface presenting multiple cutting sites comprising apertures suitable for passing debris into a cavity defined by an inner surface of the shell portion where the debris may accumulate, the shell having a static insertion profile being defined by a first curved portion generated about a first radius with a center that lies on the axis and a second curved portion generated about a center that is spaced apart and not necessarily parallel to ~~from~~ the axis, the second curved portion defining an edge reducing a static insertion profile area of the cutting structure, the cutting structure having a dynamic profile area generated upon rotation, both static insertion and dynamic profile areas lying transverse to the axis, wherein the edge defined by the second curved portion reduces the static insertion profile area of the cutting structure such that the static insertion profile area is smaller than the dynamic profile area ~~static insertion profile area is smaller than the dynamic profile area~~.

2 (original). The reamer of claim 1 further comprising a pair of first curved portions that are situated in opposed relationship to one another with respect to the shell.

3 (original). The reamer of claim 2 wherein the pair of first curved portions describes a diameter of the domed shell.

4 (original). The reamer of claim 1 further comprising a pair of second curved portions that are situated in opposed relationship from one another with respect to the shell.

5 (original). The reamer of claim 4 wherein the pair of second curved portions is concave relative to the rotational axis.

6 (original). The reamer of claim 4 wherein the pair of second curved portions is convex relative to the rotational axis.

7 (original). The reamer of claim 4 wherein the pair of second curved portions is generally circular or parabolic.

8 (original). The reamer of claim 1 further comprising a plurality of first curved portions and a plurality of second curved portions, wherein the number of first curved portions equals the number of second curved portions.

9 (original). The reamer of claim 8 wherein the number of first curved portions is 2 or 4.

10 (original). The reamer of claim 1 further comprising a pair of first curved portions that are separated by a pair of second curved portions, together describing a cruciform shape.

11 (original). The reamer of claim 1 wherein the shell has a partially hemispherical domed shape with an apex and a pair of first curved portions that respectively define a pair of diametrically opposed base portions spaced from the apex.

12 (original). The reamer of claim 11 wherein the base portions further comprise bladed portions.

13 (original). The reamer of claim 1, the cutting structure having a static insertion profile so that the reamer is less invasive during its removal from the incision.

14 (original). The reamer of claim 1, the cutting structure having a static insertion profile area allowing for easier removal from the incision.

15 (original). The reamer of claim 1, the cutting structure having a static insertion profile area with a width allowing easier extraction of the reamer.

16 (original). The reamer of claim 1, the cutting structure having a static extraction profile during its removal from the incision, the static extraction profile defining an area with an extraction width taken through the axis and the static insertion profile defining an area with an insertion width taken through the axis, wherein the extraction width is less than the insertion width.

17 (original). The reamer of claim 1 wherein the dynamic profile area is circular.

18 (original). The reamer of claim 11 further comprising means for mounting the cutting structure to a tool holder for controlled rotation by a power source.

19 (original). The reamer of claim 18 wherein the mounting means further comprises an alignment structure extending between the base portions and cooperable with the tool holder for controlled rotation.

20 (original). The reamer of claim 19 wherein the alignment structure further comprises a centering boss.

21 (original). The reamer of claim 19 wherein the alignment structure includes a centering aperture that is rounded or keyed.

22 (original). The reamer of claim 18 wherein the mounting means further comprises a plate with a keyed aperture for alignment and centering of the cutting structure during its rotation by the handle.

23 (original). The reamer of claim 19 wherein the alignment structure further

comprises a pair of bars spaced from one another on either side of the axis, with a pair of keyed male centering members projecting inwardly from the bars toward the axis, respectively, for attachment to the handle.

24 (original). The reamer of claim 19 wherein the alignment structure further comprises a pair of bars each having opposed terminal ends, with adjacent ends of the respective bars being spaced from one another along each base portion, including a centering structure located on the pair of bars for attachment to the handle.

25 (currently amended). The reamer of claim 24 wherein the centering structure further comprises a crossmember forming an H-shape across the pair of bars for receiving, between the bars, at least one ~~or more~~ longitudinal pin[[s]] from a bayonet catch on the handle.

26 (original). The reamer of claim 19 wherein the alignment structure further comprises a bar having opposed terminal ends fixed at the base, including a cross-member having opposed free ends and being of a lesser length than the bar, the cross-member intersecting the bar at the axis to define a cruciform shape for receipt by a bayonet catch on the handle, while allowing removal of debris adjacent the free ends of the cross-member.

27 (currently amended). The reamer of claim 19, the alignment structure further comprising a pair of bars each having opposed terminal ends, with adjacent ends of the bars being spaced from one another along each base portion on either side of the axis, wherein the bars have opposing female notches, respectively, for receiving at least one transverse pin ~~or a pair of transverse pins~~ from a bayonet catch on the handle.

28 (currently amended). The reamer of claim 24 wherein the bars are curved ~~or bent~~ toward one another, the centering structure being formed at their closest convergence

for receipt by corresponding bayonet catches on the handle.

29 (currently amended). The reamer of claim 28 wherein each of the bars is generally formed in an S-shape, the bars being non-intersecting and together presenting a ~~generally Y-shaped or hourglass~~ configuration for receipt of the bars by corresponding bayonet catches of the handle.

30 (original). The reamer of claim 28 further comprising a shaft having a fixed end joined to the bars adjacent the axis and extending longitudinally toward the handle, the shaft having a free end with radial spokes for receipt in corresponding bayonet catches of the handle.

31 (original). The reamer of claim 24 wherein the centering structure further comprises a shaft extending longitudinally along the axis toward the handle.

32 (original). The reamer of claim 18 further comprising a pair of second curved portions that are situated in opposed relationship from one another with respect to the shell.

33 (currently amended). A surgical reaming assembly comprising: a hollow reamer body having a wall portion with an external surface, a pair of opposed base portions and an apex defining a cut axis, the opposed base portions separated by a curved portion generated about a center that is spaced apart from the cut axis, the wall defining a central cavity and a plurality of passageways through the wall presenting cutting sites, the passageways communicating between the external surface of the wall and the central cavity for passage of removed bone and tissue through the wall into the central cavity; a holder for transmitting torque to the reamer body, for rotation of the reamer body about the cut axis; and an alignment structure provided on the body for assembly with the handle, including a first bar extending between the base portions and a second bar that intersects the first bar along the cut axis, wherein the second bar

further includes opposed free ends and has a shorter length than the first bar to allow removal of debris there around, the bars together forming a cruciform shape allowing the bars to be assembled with the handle for controlled rotation of the reamer body.

34 (original). The assembly of claim 33 further comprising an acetabular reamer with the alignment structure, which is attached to the handle by a bayonet catch.

35 (currently amended). A surgical reaming assembly comprising: a hollow reamer body having a wall portion with an external surface, a pair of opposed base portions and an apex defining a cut axis, the opposed base portions separated by a curved portion generated about a center that is spaced apart from the cut axis, the wall defining a central cavity and a plurality of passageways through the wall presenting cutting sites, the passageways communicating between the external surface of the wall and the central cavity for passage of removed bone and tissue through the wall into the central cavity; a holder for transmitting torque to the reamer body about the cut axis; and an alignment structure for assembling the reamer body to the handle, having a pair of non-intersecting curved bars each extending between fixed ends respectively located on the opposed base portions, wherein the bars converge in a direction toward the cut axis and are cooperatively received by the handle for controlled rotation of the reamer body.

36 (original). The assembly of claim 35 further comprising an acetabular reamer with the alignment structure, which is attached to the handle by a bayonet catch.

37 (original). A surgical reaming assembly comprising: a hollow reamer body having a wall with an external surface, a base and an apex defining a cut axis, the wall containing a central cavity and having a plurality of passageways through the wall presenting cutting sites, the passageways communicating between the external surface of the wall and the central cavity for passage of removed bone and tissue through the wall into the central cavity; a holder for transmitting torque to the reamer body about

the cut axis; and an alignment structure having at least two bars each extending between fixed ends that are spaced from one another along the base, wherein the bars are connected together by a cross-member in an H-shape to center the reamer body on the handle for controlled rotation of the reamer body about the cut axis.

38 (original). The assembly of claim 37 further comprising an acetabular reamer with the alignment structure, which is attached to the handle by a bayonet catch.